

- CLAIMS -

1.- An air filtration plant, comprising a filter cartridge (4) fitted with filter sleeves (6), which sleeves (6) are arranged vertically, and held stretched by appropriate means (16, 17) between two supporting structures (12, 13), the upper end (15) of said sleeves (6) being attached to openings (40) provided in an upper supporting structure (13) in the form of a plate fitted with openings, and the lower end (14) of said sleeves (6) being attached to a lower supporting structure (12), characterised in that it includes means (16, 17) for fastening the filter sleeves (6) which are suited to enable tensioning of said sleeves (6) at the upper ends thereof (15).

2.- A plant according to claim 1, characterised in that it includes means (17) for fastening the filter sleeves (6) at the upper supporting structure (13), of add-on member (38) type in the form of a ductile ring, which add-on member (38) is designed for being located within said sleeves (6) once the latter have been attached to the lower supporting structure (12), and stretched, so as to hold said sleeves (6) in this stretched condition by clamping against the contour (41) of the openings (40) of said upper supporting structure (13).

3.- A plant according to claim 2, characterised in that the ductile ring (38) includes an annular groove (39), provided on the external contour thereof, intended for being embedded on the internal contour (41) of the openings (40) of the upper structure (13).

4.- A plant according to any of the claims 2 or 3, characterised in that it includes the filter sleeves (6) whereof the upper end (15) is fitted with a structural element (36) for easier gripping thereof, manually or mechanically, in particular for a reliable tension thereof.

5.- A plant according to claim 4, characterised in that it includes the filter sleeves (6) whereof the upper end (15)

is fitted with an element in the form of a rigid collar (36) for easier gripping thereof in particular for a reliable tension thereof.

5 6.- A plant according to claim 5, characterised in that it includes the filter sleeves (6) whereof the upper end portion (37), delineated by two rigid collars (35 and 36), is generally truncated in shape, the diameter of the end rigid collar (36) being greater than the diameter of the openings (40) of the plate (13).

10 7.- A plant according to any of the claims 1 to 6, characterised in that it includes the filter sleeves (6) whereof the lower end (14) is provided with a bottom cup (20) fitted with a protruding rod (21) comprising a catching element (22), which catching element (22) is designed for co-  
15 operating with a supporting profile (23) of matching shape, provided at the lower supporting structure (12).

20 8.- A plant according to claim 7, characterised in that it includes a lower supporting structure (12) fitted with at least one supporting profile (23), in the form of folded sheet metal, formed of a central part (25) extending vertically, and whereof the upper end (26) is extended by a return element (29), extending over the whole length thereof, which return element (29) is fitted with several open slots (32) each letting through a rod (21) for catching a sleeve and locating  
25 the catching element (22) of said rod (21).

30 9.- A plant according to claim 8, characterised in that it includes a lower supporting structure (12) fitted with at least one supporting profile (23), comprising an upper return element (29) formed of two parts (30, 31) forming a dihedron, one of said parts (30) extending at right angle or substantially at right angle from the upper end (26) of the central part (25), and the other of said parts (31) being tilted downwards, which return element (29) is fitted with a plurality of open slots (32) letting through a rod (21) for

catching a sleeve, the hooking element (22) being designed for a location beneath said horizontal part (30).

10.- A tensioning tool for a filter sleeve for an air filtration plant according to any of the claims 1 to 9, characterised in that it includes :

- a seating element (46),
- a means (47) for stretching the upper end (15) of the sleeve (6), and
- a means (48) for manoeuvring the stretching means (47).

11.- A tool according to claim 10, characterised in that the manoeuvring means (48) assist mechanically the driving of the stretching means (47).

12.- A tensioning tool according to claim 11, characterised in that the manoeuvring means (48) consist of at least one gas, pneumatic or hydraulic jack-operated device, which device is arranged between the seating element (46) and the stretching means (47) so as to facilitate, during the deployment thereof, the manoeuvre of said stretching means (47).

13.- A tool according to any of the claims 10 to 12, characterised in that the stretching means (47) consist of a U-shaped element (65) intended for location beneath an element in the form of a collar (36) provided at the upper end (15) of the sleeves (6).

14.- A process for assembling a filter sleeve within an air filtration plant according to any of the claims 1 to 9, characterised in that it consists :

- in attaching the lower end (14) of the filter sleeve (6), via an appropriate fastening means (16), to the lower supporting structure (12),
- in tensioning the filter sleeve (6) by a vertical upward traction, and

- in attaching the upper end (15) of the filter sleeve (6) to the upper supporting structure (13) via an appropriate fastening means (17).

5 15.- A filter sleeve pour air filtration plant according to any of the claims 1 to 9, characterised in that it includes a hooking member (22) at the lower end thereof (14), and a structural element (36) at the upper end thereof (15), for easier gripping thereof.

10 16.- A filter sleeve according to claim 15, characterised in that it includes an upper end portion (37) generally truncated in shape, delineated by two rigid collars (35 and 36), the upper rigid collar (36) having a diameter greater than that of the lower rigid collar (35).